

What is claimed is:

1. A two-dimensional array type radiation detector, comprising:  
converting layers for responding to radiation and outputting  
a charge signal corresponding to an incident amount to thereby form  
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switching elements arranged in a matrix form under the  
converting layers and connected to the converting layers,

gate bus lines and data bus lines connected to the switching  
elements and arranged parallel to each other in spaces of rows of  
10 the pixels,

a gate driver section connected to the respective switching  
elements through the gate bus lines for sequentially turning on the  
respective switching elements at a time of reading signals,

15 a data collecting section connected to the pixels through the  
data bus lines for reading out charge signals stored in the  
respective pixels, and

a control section connected to the gate driver section and the  
data collecting section to control the same.

20 2. A two-dimensional array type radiation detector as claimed in  
claim 1, wherein one of said gate bus lines and one of said data  
bus lines are disposed in a space between two rows of the pixels.

25 3. A two-dimensional array type radiation detector as claimed in  
claim 1, wherein the two-dimensional array type radiation detector  
constitutes one module, and a plurality of modules is connected at  
end surfaces where the gate bus lines and data bus lines are not  
formed.

4. A two-dimensional array type radiation detector as claimed in claim 2, wherein said gate bus lines include line sections extending perpendicular to the data bus lines, one line section being connected to one gate bus line.

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5. A two-dimensional array type radiation detector as claimed in claim 4, wherein said data collecting section, gate driver section and control section are all located at one side of the converting layers.

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